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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,397	01/16/2002	Richard Yang	YANG3103/EM	2093
23364	7590	09/20/2005	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			WORKU, NEGUSSIE	
			ART UNIT	PAPER NUMBER
			2626	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/046,397

Applicant(s)

YANG, RICHARD

Examiner

Negussie Worku

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 13-15 is/are allowed.
- 6) ☒ Claim(s) 6 and 7 is/are rejected.
- 7) ☒ Claim(s) 8-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

*Negussie Worku*  
8/29/05

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, and as being incomplete for omitting at essential method steps.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 6 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Haga et al. (USP 6,583,456).

With regard to claim 6, Haga et al. teaches a scanner control method, (as shown in fig 13-117) where the scanner employs an image sensor (image sensor 5 of fig 13) that provides different amount of data according to different resolution modes, (image

sensor 3 of fig 13, (CIS) which can select one of the two types of resolution, (col.11, lines 10-25) the control method comprising the steps of: reading a scanning resolution selected by a user (two types of resolution low or high is selected, col.11, line 20-25); setting a resolution mode by comparing the read scanning resolution and the highest optical resolution (switch 4 of fig 13, connected to the respective light receiving elements and a driver circuit 5 for turning off/on the pixel switch 4 according to resolution, col.11, lines 24-27); generating control signals, (driver circuit of fig 13) which generates shift register control signals, (col.11, lines 29-32) switch control signals (switch 4 of fig 13) and other related control signals in accordance with the resolution mode (col.11, line 20-25); and scanning a document according to the control signals (col.11, lines 23-25).

With respect to claim 7, Haga et al. discloses the method, (as shown in fig 13-17) wherein the image sensor (image sensor 3 of fig 13) is the image sensor, see (col.11, lines 10-25).

#### ***Allowable Subject Matter***

5. The following is a statement of reasons for the indication of allowable subject matter: Claims 1-5 are allowed for the reasons the prior art searched of record neither anticipates nor suggests an image sensor outputting different amount of data according to different resolution modes, the image sensor comprises: a plurality of photo diodes for converting received optical signals into charges; three sets of transfer gates for moving out the charges on the photo diodes; three shift registers including a first, a

second and a third shift registers for receiving the charges moved out from the transfer gates, respectively, and for removing the charges according to two sets of control signals; a floating diffusion node for receiving the charges on the first, the second and the third shift registers to generate electrical signals; a charge control unit for controlling whether the output charges from the first, the second and the third shift registers are passed onto the floating diffusion node; a clamp for receiving the electrical signals generated by the floating diffusion node and maintaining the level within a range; and an output buffer unit for receiving the signals from the clamp and generating an output signal.

With respect to claims 13-15 are allowed for the reasons the prior art searched of record neither anticipates nor suggests an image sensor outputting different amount of data according to different resolution modes, the image sensor comprises: a plurality of photo diodes for converting received optical signals into charges; a plurality of sets of transfer gates for moving out the charges on the photo diodes; a plurality of shift registers for receiving the charges moved out from the transfer gates, and removing the charges according to control signals; a floating diffusion node for receiving the charges on the first, the second and the third shift registers to generate electrical signals; a charge control unit for controlling whether the output charges from the shift registers are passed onto the floating diffusion node; a clamp for receiving the electrical signals generated by the floating diffusion node and maintaining the level within a range; and an

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output buffer unit for receiving the signals from the clamp and generating an output signal.

***Claims object to having Allowable subject matter***

6. Claims 8-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

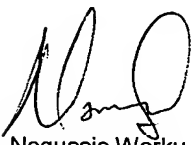
With respect to claims 8-12 are allowed for the reasons the prior art searched of record neither anticipates nor suggests 8-12 The method of claim 7, wherein the scanner is set in the highest resolution mode when the resolution is greater than  $\{\text{fraction } (1/2)\}$  of the highest optical resolution, the scanner is set in the  $\{\text{fraction } (1/2)\}$  resolution mode when the resolution is between  $\{\text{fraction } (1/4)\}$  and  $\{\text{fraction } (1/2)\}$  of the highest optical resolution, and the scanner is set in the  $\{\text{fraction } (1/4)\}$  resolution mode when the resolution is not greater than  $\{\text{fraction } (1/4)\}$  of the highest optical resolution.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Negussie Worku whose telephone number is 571-272-7472. The examiner can normally be reached on 9am-6pm.

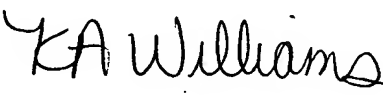
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on 571-272-7471. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Negussie Worku  
8/29/05



**KIMBERLY WILLIAMS**  
**SUPERVISORY PATENT EXAMINER**